

In the Claims:

Please amend claims 1, 3-5, 8-11, 14, 16, 18, 21-23, 26, 27, 29, and 32, as indicated below.

1. (Currently amended) A system, comprising:

a processor; and

a memory comprising program instructions, wherein the program instructions are executable by the processor to implement a policy-based automation mechanism ~~policy evaluation mechanism~~ configured to evaluate policies to provide automated computer system administration in an information technology (IT) environment, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment dependent upon an evaluation of the policy, and wherein, to evaluate policies, the policy-based automation mechanism ~~policy evaluation mechanism~~ is configured to:

access a policy and information relevant to an evaluation of the policy;
and

evaluate the same policy according to the information using two or more different inference techniques to generate ~~an~~ a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for the ~~policy evaluation~~ the positive or negative answer;

initiate the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated; and

not initiate the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is not to be initiated.

2. (Original) The system as recited in claim 1, wherein the inference techniques include one or more of probability calculus, fuzzy logic and evidential logic.

3. (Currently amended) The system as recited in claim 1, wherein the policy-based automation mechanism ~~policy-evaluation-mechanism~~ is further configured to provide the positive or negative answer and the confidence level for the positive or negative answer to a user of the system.

4. (Currently amended) The system as recited in claim 1, wherein, to initiate the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated, the policy-based automation mechanism ~~policy-evaluation-mechanism~~ is further configured to initiate ~~a~~ the process automatically in the IT environment if the positive or negative answer indicates that the process is to be initiated and if the confidence level for the policy-evaluation positive or negative answer indicate that the process can be performed according to is higher than a predetermined confidence threshold.

5. (Currently amended) The system as recited in claim 1, wherein the policy-based automation mechanism ~~policy-evaluation-mechanism~~ is configured to evaluate policies to provide automated administration for one or more of a storage management mechanism and an application management mechanism.

6. (Original) The system as recited in claim 1, wherein the inference techniques are implemented according to an uncertainty logic programming language.

7. (Original) The system as recited in claim 6, wherein the uncertainty logic programming language is one of Fuzzy Relational Inference Language (FRIL) and FRIL++.

8. (Currently amended) A system, comprising:

means for evaluating policies each specifying a set of one or more rules and a process to be automatically initiated in an information technology (IT) environment if an evaluation of the policy indicates that the specified process is to be automatically initiated, said means using two or more different inference techniques to evaluate the same policy and generate ~~an~~ a positive or negative answer as to whether the process specified by the policy is to be automatically initiated and a confidence level ~~for the policy evaluation~~ the positive or negative answer; and

~~means for providing automated computer system administration in an information technology (IT) environment according to the policy evaluations~~ automatically initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level for the positive or negative answer indicate that the process is to be initiated.

9. (Currently amended) A method, comprising:

evaluating policies to provide automated computer system administration in an information technology (IT) environment, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment if an evaluation of the policy indicates that the process is to be automatically initiated, and wherein said evaluating policies comprises:

accessing a policy and information relevant to an evaluation of the policy;
and

evaluating the same policy according to the information using two or more different inference techniques including one or more of probability calculus, fuzzy logic and evidential logic to generate ~~an~~ a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for ~~the policy evaluation~~ the positive or negative answer;

initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated; and

not initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is not to be initiated.

10. (Currently amended) The method as recited in claim 9, ~~wherein the policy evaluation mechanism is further configured to provide~~ further comprising providing the positive or negative answer and the confidence level for the positive or negative answer to a user of the system in the IT environment.

11. (Currently amended) The method as recited in claim 9, ~~further comprising wherein said initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated comprises~~ automatically initiating a the process in the IT environment if the positive or negative answer indicates that the process is to be initiated and if the confidence level for the policy evaluation positive or negative answer indicate that the process can be performed according to is higher than a predetermined confidence threshold.

12. (Original) The method as recited in claim 9, wherein said automated computer system administration in the IT environment comprises automated administration of one or more of a storage management mechanism and an application management mechanism.

13. (Original) The method as recited in claim 9, wherein the inference techniques are implemented according to one of Fuzzy Relational Inference Language (FRIL) and FRIL++.

14. (Currently amended) A computer-accessible storage medium comprising program instructions, wherein the program instructions are configured to implement:

evaluating policies to provide automated computer system administration in an information technology (IT) environment, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment if an evaluation of the policy indicates that the process is to be automatically initiated, and wherein said evaluating policies comprises:

accessing a policy and information relevant to an evaluation of the policy;

evaluating the same policy according to the information using two or more different inference techniques including one or more of probability calculus, fuzzy logic and evidential logic to generate ~~an~~ a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for the ~~policy evaluation~~ the positive or negative answer; and

~~automatically initiating a process in the IT environment if the answer and the confidence level for the policy evaluation indicate that the~~

~~process can be performed according to a predetermined confidence threshold~~

initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated; and

not initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is not to be initiated.

15. (Original) The computer-accessible medium as recited in claim 14, wherein said automated computer system administration in the IT environment comprises automated administration of one or more of a storage management mechanism and an application management mechanism.

16. (Currently amended) A system, comprising:

a processor; and

a memory comprising program instructions, wherein the program instructions are executable by the processor to implement a self-tuning policy evaluation mechanism configured to evaluate policies to provide automated computer system administration in an information technology (IT) environment, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment if an evaluation of the policy indicates that the process is to be automatically initiated, and wherein the self-tuning policy evaluation mechanism is configured to:

evaluate a policy according to information relevant to an evaluation of the policy using two or more different inference techniques to generate

results including ~~an~~ a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for ~~the policy evaluation~~ the positive or negative answer;

initiate the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated;

store the results of the policy evaluation in a database of historical information about the policy; and

access the historical information stored in the database in subsequent evaluations of the policy to generate more accurate results.

17. (Original) The system as recited in claim 16, wherein the inference techniques includes one or more of probability calculus, fuzzy logic and evidential logic.

18. (Currently amended) The system as recited in claim 16, wherein, to initiate the process specified by the policy, the self-tuning policy evaluation mechanism is further configured to automatically initiate ~~a~~ the process specified by the policy in the IT environment if the positive or negative answer indicates that the process is to be initiated and if the confidence level for the policy evaluation positive or negative answer indicate that the process can be performed according to is higher than a predetermined confidence threshold.

19. (Original) The system as recited in claim 16, wherein the self-tuning policy evaluation mechanism is configured to evaluate policies to provide automated administration for one or more of a storage management mechanism and an application management mechanism.

20. (Original) The system as recited in claim 16, wherein the inference techniques are implemented according to one of Fuzzy Relational Inference Language (FRIL) and FRIL++.

21. (Currently amended) A system for providing automated computer system administration in an information technology (IT) environment according to policy evaluations, comprising:

means for evaluating policies each specifying a set of one or more rules and a process to be automatically initiated in an information technology (IT) environment if an evaluation of the policy indicates that the specified process is to be automatically initiated, said means using two or more different inference techniques to evaluate the same policy and generate results including an a positive or negative answer and a confidence level for the policy evaluation the positive or negative answer;

means for initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated;

means for storing the results of the policy evaluations as historical information about the policy evaluations; and

means for applying the historical information about the policy in subsequent evaluations of the policy to generate more accurate results.

22. (Currently amended) A method, comprising:

evaluating policies to provide automated computer system administration in an information technology (IT) environment, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the

IT environment if an evaluation of the policy indicates that the process is to be automatically initiated, and wherein said evaluating policies comprises:

evaluating a policy according to information relevant to an evaluation of the policy using two or more different inference techniques including one or more of probability calculus, fuzzy logic and evidential logic to generate results including ~~an~~ a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level ~~for the policy evaluation~~ the positive or negative answer;

initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated;

storing the results of the policy evaluation in a database of historical information about the policy; and

accessing the historical information stored in the database in subsequent evaluations of the policy to generate more accurate results.

23. (Currently amended) The method as recited in claim 22, ~~further comprising~~ wherein said initiating the process specified by the policy in the IT environment comprises automatically initiating a the process specified by the policy in the IT environment if the positive or negative answer indicates that the process is to be initiated and if the confidence level for the policy evaluation positive or negative answer indicate that the process can be performed according to is higher than a predetermined confidence threshold

24. (Original) The method as recited in claim 22, wherein said automated computer system administration in the IT environment comprises automated administration of one or more of a storage management mechanism and an application management mechanism.

25. (Original) The method as recited in claim 22, wherein the inference techniques are implemented according to one of Fuzzy Relational Inference Language (FRIL) and FRIL++.

26. (Currently amended) A computer-accessible storage medium comprising program instructions, wherein the program instructions are configured to implement:

evaluating policies to provide automated computer system administration in an information technology (IT) environment, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment if an evaluation of the policy indicates that the process is to be automatically initiated, and wherein said evaluating policies comprises:

evaluating a policy according to information relevant to an evaluation of the policy using two or more different inference techniques including one or more of probability calculus, fuzzy logic and evidential logic to generate results including an a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for ~~the policy~~ evaluation the positive or negative answer,

initiating the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated;

storing the results of the policy evaluation in a database of historical information about the policy; and

accessing the historical information stored in the database in subsequent evaluations of the policy to generate more accurate results.

27. (Currently amended) The computer-accessible medium as recited in claim 26, wherein, in said initiating the process specified by the policy in the IT environment, the program instructions are configured to further implement automatically initiating a the process specified by the policy in the IT environment if the positive or negative answer indicates that the process is to be initiated and if the confidence level for the policy evaluation positive or negative answer indicate that the process can be performed according to is higher than a predetermined confidence threshold.

28. (Previously presented) The computer-accessible medium as recited in claim 26, wherein said automated computer system administration in the IT environment comprises automated administration of one or more of a storage management mechanism and an application management mechanism.

29. (Currently amended) A system for automated administration of an information technology (IT) environment, comprising:

a plurality of decision engines comprising:

one or more local decision engines each configured to provide automated administration for one component in the IT environment according to one or more local policies for the component, wherein each local policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment if an evaluation of the local policy indicates that the process is to be automatically initiated; and

a central decision engine configured to provide automated administration of the IT environment according to one or more high-level policies for the IT environment, wherein each high-level policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment if an evaluation of the high-level policy indicates that the process is to be automatically initiated;

wherein each of the decision engines is configured to:

evaluate a policy associated with the decision engine according to information relevant to an evaluation of the policies using two or more different inference techniques including probability calculus, fuzzy logic and evidential logic to generate results including ~~an~~ a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for ~~the policy evaluation~~ the positive or negative answer; and

automatically initiate ~~a~~ the process specified by the policy in the IT environment if the positive or negative answer indicates that the process is to be initiated and if the confidence level for the ~~policy evaluation~~ positive or negative answer indicate that the process can be performed according to is higher than a predetermined confidence threshold.

30. (Original) The system as recited in claim 29, wherein the components include one or more of a storage management mechanism and an application management mechanism.

31. (Original) The system as recited in claim 29, wherein the local decision engines are further configured to provide the results of local policy evaluations to the

central decision engine for use in evaluations of the high-level policies for the IT environment.

32. (Currently amended) The system as recited in claim 29, wherein, to provide automated administration of the IT environment according to one or more high-level policies for the IT environment, the central decision engine is configured to:

evaluate the high-level policies using two or more different inference techniques to generate results including positive or negative answers as to whether processes specified by the high-level policies is to be automatically initiated and associated confidence levels for the positive or negative answers generated by the high-level policy evaluations; and

delegate local policies to the one or more local decision engines for evaluation.